

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An electrophoretic display (101) comprising a drive unit (110), ~~a drive circuitry~~, and at least one pixel cell (102) that is arranged with drive electrodes (103, 104) and that contains an electrophoretic media (105) that is responsive to an electric field applied between said drive electrodes (103, 104); wherein said drive unit (110) is arranged to provide said pixel cell (102) with a drive signal via ~~said drive circuitry~~ and is switchable between a monochrome drive scheme (501) and a grayscale drive scheme (502), said monochrome drive scheme (501) involving drive signals providing for only two extreme optical pixel states, and said grayscale drive scheme (502) involving drive signals providing for said two extreme optical pixel states and at least one additional, intermediate pixel state between said two extreme optical pixel states, wherein said grayscale drive scheme provides drive signals for said two extreme optical states that are different than said monochrome drive scheme for said two extreme

optical states, and wherein said drive unit (110) furthermore is operative to apply a separate transition drive signal (504) when switching from said grayscale drive scheme (502) to said monochrome drive scheme (501), whereby said transition drive signal is arranged such that is said transition drive signal counteracts the build-up of remnant DC voltage in the pixel cell.

2. (Currently amended) An The electrophoretic display (101) according to claim 1, and comprising a number of pixel cells (102) that are addressable in image frames, wherein the said grayscale drive scheme (502) is employed for image frames that include at least one intermediate pixel state and the monochrome drive scheme (501) is employed for image frames that include extreme states only.

3. (Currently amended) An The electrophoretic display (101) according to claim 1, further comprising a memory unit wherein pre-defined drive signals corresponding to the respective drive schemes are stored accessible by the drive unit (110).

4. (Currently amended) An The electrophoretic display (101)

according to claim 1, wherein said transition drive signal {504} drives the pixel cell {102} repeatedly between the two limit colors to each of said two extreme optical pixel states {602} so as to remove any remnant DC voltage in the pixel cell before the monochrome drive scheme is initiated.

5. (Currently amended) An The electrophoretic display {101} according to claim 1, wherein said transition drive signal {504} involves is a drive signal corresponding to a signal in the grayscale drive scheme {502} that corresponds to a one of the two extreme optical pixel states of the monochrome drive scheme that would have immediately followed said transition drive signal and that replaces the one of the two extreme optical pixel states of the monochrome drive scheme that would have immediately followed said transition drive signal.

6. (Currently amended) An The electrophoretic display {101} according to claim 1, wherein the transition drive signal {504} is selected from a transition drive scheme that comprises more than one alternative transition drive signals.

7. (Currently amended) An—The electrophoretic display (101) according to claim 1, wherein the transition drive signal (504) is applied when switching to said monochrome drive scheme (501) only when switching from a subset of the pixel states provided for by said grayscale drive scheme (502) that is less than all of the pixel states of said grayscale drive scheme, otherwise the transition drive signal is not applied.

8. (Currently amended) An—The electrophoretic display (101) according to claim 7, wherein said subset of pixel states excludes said extreme pixel states.

9. (Currently amended) An—The electrophoretic display (101) according to claim 1, wherein said transition drive signal (504) involves—is a drive signal corresponding—that corresponds to a signal in the monochrome drive scheme (501)that would have immediately followed said transition drive signal but modified with an additional remnant DC voltage reducing voltage pulse and that replaces the signal in the monochrome drive scheme that would have immediately followed said transition drive signal.

10. (Currently amended) An—The electrophoretic display (101) according to claim 9, wherein said additional remnant DC voltage reducing voltage pulse is employed before said monochrome drive scheme (501) drive signal.

11. (Currently amended) A method for driving an electrophoretic display, said method comprising the steps of:

[[-]] receiving image information regarding an image to be displayed;

[[-]] selecting (503, 505) a drive scheme from a monochrome updating drive scheme and a grayscale updating drive scheme, depending on the existence of grayscales in the image to be displayed, wherein said monochrome drive scheme includes drive signals providing for only two extreme optical pixel states, and said grayscale drive scheme includes drive signals providing for said two extreme optical pixel states and at least one additional, intermediate pixel state between said two extreme optical pixel states, wherein said grayscale drive scheme provides drive signals for said two extreme optical states that are different than said monochrome drive scheme for said two extreme optical states;

[[-]] employing a transition signal (504) in case the drive

scheme is changed from the grayscale drive scheme (502) to the monochrome drive scheme (501), said transition signal being such that any remnant DC voltage is reduced;

[-] employing a drive signal that is based on the selected drive scheme and that corresponds to said image to be displayed.